



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,012	09/25/2003	Kavitha Srinivas	YOR920030251US1 (16768)	7874
23389	7590	11/02/2006	EXAMINER PHAM, THAI V	
SCULLY SCOTT MURPHY & PRESSER, PC 400 GARDEN CITY PLAZA SUITE 300 GARDEN CITY, NY 11530			ART UNIT 2191	

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/671,012

Applicant(s)

SRINIVAS ET AL.

Examiner

Thai Van Pham

Art Unit

2191

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09/25/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is the initial office action based on the application filed on October 27, 2006.

Claims 1 – 20 are currently pending and have been considered below.

Specification

1. The disclosure is objected to because of the following informalities: typographical error(s).

-- Paragraph [0016]: the word "*patterns*" is misspelled as "*patters*" in the sentence next to last.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1 – 8 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

-- As disclosed in the specification of the application, all components recited in the claim that constitute the claimed tool (i.e., system) are constructed of software program objects and/or instructions ([0013]: "...a software architecture and methodology of the preferred tool of the invention..."). Thus, the claimed system is considered a software program containing machine-executable instructions, per se (and not associated with any physical structure); therefore, it is non-statutory according to 35 U.S.C 101. For the

Art Unit: 2191

purpose of further claim analysis under 35 U.S.C. 102 and 103, The Examiner treats Claims 1 – 8 as a computer program containing machine-readable instructions stored on a physical medium for performing the method or steps recited in the claims.

Claims 1 – 8 as a computer program containing machine-readable instructions stored on a physical medium for performing the method or steps recited in the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 – 20 are rejected under 35 U.S.C. 102(e) as being anticipated by **Stall et al.** (US 2004/0210876).

-- Claim 1:

Stall discloses *a method for monitoring the behavior of a running computer program, comprising:*

- *a pattern detector manager for inserting into a running computer program a plurality of entry breakpoints, each of said entry breakpoints being associated with one of a plurality of defined coding patterns; and*

(Fig. 2, [0034]: "...the JIT compiler inserts JMC enabling components, flags and debugging probes..."; "...the JIT compiler identifies such class methods and/or static functions by parsing the interesting code list/IDs...")

- *a pattern detector for determining, after one of the entry breakpoints is reached in the computer program, whether the program violates the coding pattern associated with said reached breakpoint.*

(Fig. 2, [0039]: "...Rigger Method Entry ...determine whether the method is "interesting"..."; "...If the method is interesting, JMC-Probed inserts a break op-code ...after the triggering probe...")

-- Claim 2:

Stall discloses *a method according to claim 1,*

- *wherein the pattern detector manager automatically inserts a plurality of breakpoints for pattern detection, with little or no intervention from the user.*

(Fig. 2, [0034] and [0039])

-- Claim 3.

Stall discloses *a method according to claim 1,*

- *wherein, when one of the entry breakpoints is reached in the computer program, the pattern detector manager inserts into the program at least one further breakpoint, each further breakpoint identifying a respective step in the program that is part of the coding pattern associated with said one of the entry breakpoints.*

(Fig. 2, [0041] and [0042]: "JMC step-in ...places a breakpoint ...after the call to the method being stepping into..."; "JMC step-out ...inserts a breakpoint at the return address...")

-- Claim 4.

Stall discloses *a method according to claim 1,*

- *for use with a debugger for debugging the computer program, and further*

(Fig. 2, [0032] – [0034]: “debugger”)

- *including a launcher to invoke the pattern detector manager when the debugger is used to debug the program.*

(Fig. 2, [0031]: “A primary compiler with a debug switch turned on...”; [0032]: “...the debugger generates a list of interesting code...”)

-- Claims 5 and 6.

Stall discloses *a method according to claim 1,*

- *wherein the pattern detector manager removes the entry breakpoints at specified times;*
- *wherein the pattern detector manager removes the entry breakpoints and the further breakpoints at specified times.*

([0044]: deactivation of probes)

-- Claim 7.

Stall discloses *a method according to claim 3, wherein:*

- *the pattern detector manager includes means for monitoring for the occurrences of the entry breakpoints; and*

(Fig. 2, [0039]: “Any thread that encounters an activated probe is halted...”)

- *the pattern detector manager inserts said at least one further breakpoint into the computer program in response to the monitoring means detecting the occurrence of said one of the entry breakpoints.*

(Fig. 2, [0039]: "If the current thread is doing TMC stepping ...if the method is interesting, JMC-Probe inserts a break op-code ...after the debugging probe...")

-- Claim 8.

Stall discloses *a method according to claim 1,*

- *wherein the plurality of defined coding patterns are selected from the group comprising best practice patterns and problematic coding patterns.*

(Figs. 2 and 3, [0032] and [0050]: "interesting code")

-- Claims 9 – 14: are method claims for performing a method corresponding to the method performed by the computer program of claims 1, 3 – 8, respectively; Therefore, claims 9 – 14 are rejected for the same reason set forth in connection to the rejection of claims 1, 3 – 8 above, respectively.

-- Claims 15 – 20: are computer product claims for performing a method corresponding to the method performed by the computer program of claims 1, 3 – 8, respectively; Therefore, claims 15 – 20 are rejected for the same reason set forth in connection to the rejection of claims 1, 3 – 8 above, respectively.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-- **Leask et al.** (US 6,412,106), Graphical System and Method for Debugging Computer Programs. InterVoice Limited Partnership.

-- **Bernstein et al.** (US 2004/0205747), Breakpoint for Parallel Hardware Threads in Multithreaded Processor.

-- **Carter et al.** (US 6,249,907), Method System and Article of Manufacture for Debugging a Computer Program by Encoding User Specified Breakpoint Types at Multiple Locations in the Computer Program. IBM.

-- **McBrearty et al.** (US 6,966,051), Automatically Generated Symbol-Based Debug Script Executable by a Debug Program for Software Debugging. IBM.

Art Unit: 2191

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai Van Pham whose telephone number is (571) 270-1064. The examiner can normally be reached on Monday - Thursday, 9am - 5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TVP
10/16/2006



Wei Y. Zhen
Supervisory Patent Examiner